What is claimed are:

1. A transistor in a semiconductor device, comprising:

a gate electrode formed in a given pattern in a low voltage device region and a high voltage device region on a semiconductor substrate;

source/drain formed in the semiconductor substrate at both corners of the gate electrode;

a first gate oxide film formed between the gate electrode and the semiconductor substrate in the low voltage device region and having a first nitrification oxide film; and

a second gate oxide film formed between the gate electrode and the semiconductor substrate in the high voltage device region and having a stack structure of a second nitrification oxide film/oxide film/third nitrification oxide film.

2. The transistor as claimed in claim 1, wherein the concentration of nitrogen in the first nitrification oxide film is 10 ~ 15%.

3. The transistor as claimed in claim 1, wherein the concentration of nitrogen in the second nitrification oxide film or the third nitrification oxide film is 0.1% ~ 3%.

4. The transistor as claimed in claim 1, wherein a thickness of the first gate oxide film is 12 ~ 20 Å and a thickness of the second gate oxide film is 35 ~ 55 Å.

5. A method of fabricating a transistor in a semiconductor device, comprising the steps of:

simultaneously growing a first nitrification oxide film on the entire structure of a semiconductor substrate in which a low voltage device region and a high voltage device region are defined and a first oxide film on the first nitrification oxide film;

forming a second oxide film below the first nitrification oxide film;

removing the first oxide film, the first nitrification oxide film and the second oxide film formed in the low voltage device region;

simultaneously growing a second nitrification oxide film in the low voltage device region and a third oxide film on the second nitrification oxide film, and at the same time growing a third nitrification oxide film between the second oxide film and the semiconductor substrate in the high voltage device region;

nitrifying the first oxide film of the high voltage device region to form a fourth nitrification oxide film formed along with the first nitrification oxide film and nitrifying the third oxide film of the low voltage device region to form a fifth nitrification oxide film formed along with the second nitrification oxide film, by means of a nitrification treatment process;

forming a conductive material layer on the entire structure;

forming a stack structure of the first gate oxide film consisting of a fifth nitrification oxide film and a gate in the low voltage device region and a stack structure of the second gate oxide film consisting of the third nitrification oxide film/second oxide film/fourth nitrification oxide film and a gate in the

high voltage device region, by means of a patterning process; and

forming an insulating spacer at the sidewalls of the gate and source/drain in the semiconductor substrate at the sidewall of the gate.

6. The method as claimed in claim 5, wherein the first ~ third nitrification oxide films are formed using a N_2O gas or a NO gas.

7. The method as claimed in claim 6, wherein the process using the NO gas is implemented at a temperature of 750 ~ 950℃ while supplying N_2 of 5 ~ 10slm and the NO gas of 300 ~ 900sccm.

8. The method as claimed in claim 5, wherein the second oxide film is formed using an O_2 gas or a mixed gas of O_2+H_2.

9. The method as claimed in claim 5, wherein a photoresist pattern formed in order to remove the first oxide film, the first nitrification oxide film and the second oxide film formed in the low voltage device region is removed using an ozone water.

10. The method as claimed in claim 5, wherein the nitrification treatment process is implemented using a remote plasma nitrification treatment process and is implemented under N_2 and He atmosphere at a plasma power of 100 ~ 700W, a pressure of 50 ~ 1000mTorr and a temperature of 180 ~ 500℃ for 20 seconds ~ 5 minutes.

11. The method as claimed in claim 5, wherein the concentration of nitrogen in the third nitrification oxide film or the fourth nitrification oxide film is 0.1% ~ 3%.

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12. The method as claimed in claim 5, wherein the concentration of nitrogen in the fifth nitrification oxide film is 10 ~ 15%.